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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,985

09/07/2006

Shinya Kondoh

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EXAMINER

PAK, SUNG H

ART UNIT

PAPER NUMBER

2874

MAIL DATE

DELIVERY MODE

08/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,985	KONDOH ET AL.	
	Examiner	Art Unit	
	SUNG H. PAK	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/7/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

Information disclosure statement filed 9/07/2006 has been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Ma (US 2005/0117095 A1- hereinafter “Ma”).

Ma discloses a liquid crystal display apparatus comprising a first substrate (e.g. ‘140’ Fig. 1); a second substrate (e.g. ‘130’ Fig. 1); a reflective polarizer (e.g. ‘170’ in Fig. 1; or ‘261’ in Fig. 2), mounted on said first substrate and having a first transmission axis and a first reflection axis at right angles to each other (paragraphs [0037]-[0038], for transmitting linearly polarized light vibrating in a plane parallel to said first transmission axis and for reflecting linearly polarized light vibrating in a plane parallel to said first reflection axis (Fig. 2; paragraph [0037]-[0038])); a polarizer, mounted on said second substrate (‘260’ Fig. 2) and having a second transmission axis, for transmitting linearly polarized light vibrating in a plane parallel to said second transmission axis (paragraph [0037]-[0038]); and a liquid crystal layer provided between

said first and second substrates ('110' Fig. 2), and having a first mode which causes the direction of polarization of incident light to change by utilizing birefringence ('111' Fig. 2) and a second mode which does not utilize birefringence and therefore does not cause the direction of polarization of incident light to change ('112' Fig. 2), wherein a display state is switched between a bright display state and a dark display state by applying a voltage to said liquid crystal layer (paragraph [0037]-[0038]), and said bright display state is produced by driving said liquid crystal layer in said second mode (paragraph [0038]); said bright display state is produced by driving said liquid crystal layer in said second mode (Fig. 2);

wherein said bright display state is produced by causing ambient light entering said liquid crystal layer through said second transmission axis of said polarizer to be reflected at said reflective polarizer and by allowing said reflected light to return through said liquid crystal layer and emerge from said polarizer (Fig. 2);

wherein the liquid crystal layer maintains one or the other of first and second stable states in the absence of an applied voltage, and one or the other of said first and second states is set as said second mode (paragraph [0002]);

wherein, in said second stable state, liquid crystal molecules are aligned in a direction substantially parallel to said second transmission axis (Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2874

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma (US 2005/0117095 A1) in view of Okamoto et al. (US 2005/0248698 A1- hereinafter "Okamoto").

Regarding claims 6-7, Ma discloses a liquid crystal display device as discussed above. However, it does not explicitly teach the use of liquid crystal molecules tilted at 45 degrees, or the liquid crystal layer being vertically aligned, in the manner claimed in the present application. On the other hand, Okamoto discloses the use of a LCD device having liquid crystal display layer oriented in a vertical alignment (Fig. 1), and the liquid crystal display layer being actuated to 45 degrees angle (paragraph [0130]). Such arrangement would be readily recognized as advantageous and desirable to one of ordinary skill in the art because it allows for LCD display device with low driving voltage requirement. Therefore, it would have been obvious to one of ordinary skill in the art to modify the device of Ma to have liquid crystal layer that is vertically oriented, or liquid crystal molecules that are tilted at 45 degrees, in the manner claimed in the present application.

Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma (US 2005/0117095 A1).

Regarding claims 8-14, Ma discloses a liquid crystal display device as discussed above. However, it does not explicitly teach the use of auxiliary light source as claimed in the present application. On the other hand, the use of auxiliary light source in LCD display device is well known and common in the art. Auxiliary light sources provide illumination of LCD displays regardless of availability and amount of ambient light in the surrounding environment. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device of Ma to have auxiliary light source in the manner claimed in the present application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUNG H. PAK whose telephone number is (571)272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571)272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2874

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sung H. Pak
Primary Examiner
Art Unit 2874

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Primary Examiner, Art Unit 2874